

AMENDMENTS

In The Claims

Claim 1. (currently amended) A power adapter having a freely rotatable direct current (DC) plug connection, comprising:

a main body, including a casing that respectively encloses an adapter circuit board, a DC connector port and an alternating current (AC) connector port, the DC connector port and the AC connector port being respectively arranged on the adapter circuit board;

a DC wire, having a first terminal electrically connected to a DC plug that mates with the DC connector port according to a freely rotatable manner, wherein the DC plug is detachable from the DC connector port; and

an AC wire, having a second terminal electrically connected to the AC connector port.

Claim 2. (original) The power adapter of claim 1, wherein the casing further includes an opening at a location corresponding to that of the DC connector port on the adapter circuit board.

Claim 3. (original) The power adapter of claim 2, wherein the DC plug further comprises:

an electrical connecting part, mating with the DC connector port; and

an insulating part, partially covering the electrical connecting part, the insulating part being further provided with a slot that engages by fitting with a rim of the opening of the casing in a manner to allow a free rotation of the DC plug relative to the casing while ensuring the electrical and mechanical connection there between.

Claim 4. (original) The power adapter of claim 3, wherein the insulating part further includes a stress-buffer structure.

Claim 5. (original) The power adapter of claim 1, wherein the casing is formed in an approximately parallelepiped shape.

Claim 6. (original) The power adapter of claim 1, wherein the casing is formed in an approximately parallelepiped shape and further includes at least a recessed cavity.

Claim 7. (original) The power adapter of claim 6, wherein the DC plug freely and rotatably connects the casing within the recessed cavity.

Claim 8. (original) The power adapter of claim 1, wherein a third terminal of the DC wire further connects an output plug.

Claim 9. (original) The power adapter of claim 1, wherein a fourth terminal of the AC wire connects a plug.

Claim 10. (currently amended) A freely rotatable electrical connection structure of an electrical device, comprising:

an electrical device, having a casing in which is arranged a direct current (DC) connector port and through which is defined an opening; and

an electrical plug, including an electrical connecting part and an insulating part, the electrical connecting part rotatably mating with the DC connector port, and the insulating part further including a slot that engages by fitting with a rim of the opening of the casing in order to secure the connection between the electrical plug and the DC connector port while allowing a free rotation there between;